

Claims

1. A method for sealing and/or reconditioning of pipes (4) inaccessible from the outside due to location inside building elements, in the ground or the like, in which a fluid coating material is sprayed out of at least one nozzle (2) moved through the pipe towards the inner wall (3) of the pipe for covering at least parts thereof, and in which the material is then brought to harden for forming a part of the wall of the pipe where it has been applied, characterized in that the method is utilized for sealing and/or reconditioning of pipes having one or more substantial holes (12) through the pipe wall, that prior to said spraying at least one material piece (10) being divided in the longitudinal direction thereof and held together through means (11) to a pipe piece (17, 17') with a smaller outer diameter than the inner diameter of the pipe is introduced into the pipe to a location for a substantial hole through the pipe wall for covering the hole, that the means for holding together is then broken so that the pipe piece increases the diameter thereof while releasing potential energy and will under pretension bear against the inner wall of the pipe, and that the material piece forming the pipe piece has no ability to seal said hole alone, but it forms in the subsequent spraying of coating material an auxiliary wall over the hole retaining the material sprayed within the pipe.
2. A method according to claim 1, characterized in that a camera is introduced into the pipe together with the pipe piece and that the location in which the means holding the pipe piece (17, 17') together under pretension is to be broken is determined on the basis of images of the interior of the pipe displayed by the camera.
3. A method according to claim 1 or 2, characterized in that a bellow-like member (15) expandable through supply of a pressurized medium is brought to expand inside said pipe piece (17,

17') when reaching said location for the substantial hole (12) for breaking said means (11) for holding it together.

4. A method according to claim 3, characterized in that it is a bellow-like member (15) in the form of a rubber bellow that is brought to expand through supply of compressed air thereto.
5. A method according to claim 3 or 4, characterized in that said pipe piece (17, 17') is moved inside the pipe towards said location while holding it through a bellow-like member (15) located thereinside and partially expanded, said member being brought to expand further when reaching said location.
6. A method according to any of the preceding claims, characterized in that a said pipe piece (17, 17') having a material thickness being less than half the thickness of the wall of the pipe is introduced into the pipe to said location.
7. A method according to any of claims 1-5, characterized in that a said pipe piece (17, 17') having a material thickness of 0.2-3 mm, advantageously 0.8-1.4 mm and preferably about 1 mm, is introduced into the pipe to said location.
8. A method according to any of the preceding claims, characterized in that it is a said pipe piece (17, 17') made of glass fibre reinforced polyester that is introduced into the pipe to said location.
9. A method according to any of the preceding claims, characterized in that it is a said pipe piece (17, 17') made of sheet that is introduced into the pipe to said location.
10. A method according to any of the preceding claims, characterized in that it is a pipe piece (17), which in a state applied over a said substantial hole (12) after breaking said means (11)

for holding it together surroundingly covers the inner wall of the pipe, that is used.

5 11. A method according to any of claims 1-9, characterized in that it is a said pipe piece (17'), which in a state applied over a said substantially hole (12) after breaking said means (11) for holding it together has a longitudinal gap between the two circumferential ends thereof with a transversal dimension smaller than half the circumference of the pipe that is used for enabling
10 sealing of at least one said substantial hole located opposite to a so-called T-branch of the pipe.

12. A method according to any of the preceding claims, characterized in that it is one or more ribbons (11) of an easily break-
15 able material that hold the pipe piece (17, 17') together when moving it to said location.

13. A method according to any of the preceding claims, characterized in that it is a coating material comprising a mixture of
20 polyester and a hardening agent, preferably also glass flakes for obtaining a coating consisting of a glass flake reinforced polyester, that is sprayed on the inner wall of the pipe.

14. A method according to any of claims 1-12, characterized in
25 that it is a coating material comprising a fire proof mass containing mineral wool – so-called fire proof paint – that is sprayed on the inner wall of the pipe.

15. A method according to any of the preceding claims, characterized
30 terized in that it is carried out for sealing and/or reconditioning of a waste pipe in a building.

16. A method according to any of the preceding claims, characterized
35 terized in that it is carried out for sealing and/or reconditioning of a ventilating pipe in a building.

17. A method according to any of the preceding claims, characterized in that the pipe piece (17, 17') is moved in the pipe to a location for covering a hole (12) having a diameter exceeding 2 mm, exceeding 10 mm or exceeding 20 mm.

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18. A member adapted to be used for forming an auxiliary wall when internally spraying a pipe (4) inaccessible from the outside due to a location thereof in building elements, in the ground or the like with coating material, characterized in that it is designed as a pipe piece (17, 17') held together under pretension through means (11) to an outer diameter being smaller than the inner diameter of the pipe, and that the pipe piece is formed by a material piece (10) being divided in the longitudinal direction thereof and adapted to strive towards a resting position with an outer diameter exceeding the inner diameter of the pipe into which the pipe piece is intended to be introduced after removing the action of said means.

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